CLAIMS:

1. Method of registering a first image and a second image, the method comprising the steps of: assuming the first image as being of elastic material such that it has an elasticity; determining a similarity between the first image and the second image; and determining a force field which, when applied to the first image, increases the similarity.

2. The method of claim 1, further comprising the step of: determining at least one first parameter of the force field such that the similarity is maximised.

3. The method of claim 1, further comprising the step of: determining at least one second parameter relating to the elasticity of the first image such that the similarity is maximised.

4. The method of claim 2, wherein the at least one first parameter includes at least one of a force strength of at least one force of the force field, a force direction of at least one force of the forces of the force field, at least one location where at least one force of the force field acts on the first image, a form of at least one force of the force field, a standard deviation of a Gaussian force applied as the at least one force of the forces of the force field and a Poisson ratio.

5. The method of claim 2, wherein the at least one parameter of the force field is optimised by minimizing the following equation:

$$\arg \max_{\mathbf{p},\mathbf{f}(\mathbf{p}),\sigma(\mathbf{p}),\nu} M(I_t(x), T(\mathbf{p},\mathbf{f}(\mathbf{p}),\sigma(\mathbf{p}),\nu)(I_s(x)))$$

M being a similarity measure, I_t and $T(I_s)$ denoting intensities of the first and second images, $\mathbf{p}$ denoting a vector of points where Gaussian forces $\mathbf{f(p)}$ are

applied, □ denoting a standard deviation of the Gaussian forces, ν denoting a Poisson ratio and **x** denoting a coordinate.

6. The method of claim 1, wherein the method is applied to data sets relating to one of RTP, MRI, SPECT, PET and US.

7. Image processing device, comprising: a memory for storing a first image and a second image; and an image processor for registering the first image and the second image, wherein the image processor is adapted to perform the following operation: assuming the first image as being elastic such that it has an elasticity; determining a similarity between the first image and the second image; and determining a force field which, when applied to the first image, increases the similarity.

8. Software program for registering a first image and a second image, wherein the software program causes a processor to perform the following operation when the software program is executed on the processor: assuming the first image as being elastic such that it has an elasticity; determining a similarity between the first image and the second image; and determining a force field which, when applied to the first image, increases the similarity.